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cont'd.* 5. (Amended) A photonic crystal fibre as claimed in claim 1, in which the rotational symmetry is about an axis passing through the core.

8. (Amended) A photonic crystal fibre as claimed in claim 1, in which the core does not include a hole.

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cont'd.* 9. (Amended) A photonic crystal fibre as claimed in claim 1, in which the arrangement of holes has at-most-two-fold rotational symmetry about an axis parallel to the longitudinal axis of the fibre.

10. (Amended) A photonic crystal fibre as claimed in claim 1, in which the arrangement of holes has higher-than-two-fold rotational symmetry about an axis parallel to the longitudinal axis of the fibre.

11. (Amended) A photonic crystal fibre as claimed in claim 1, in which the lack of higher rotational symmetry at least partly results from a variation, across the cross-section of the fibre, in the microstructure of the core.

12. (Amended) A photonic crystal fibre as claimed in claim 1, in which the lack of higher rotational symmetry at least partly results from a variation, across the cross-section of the fibre, in the diameter of the holes.

13. (Amended) A photonic crystal fibre as claimed in claim 1, in which the lack of higher rotational symmetry at least partly results from a variation, across the cross-section of the fibre, in the bulk material.

14. (Amended) A photonic crystal fibre as claimed in claim 1, in which the lack of higher rotational symmetry at least partly results from a variation, across the cross-section of the fibre, in the material contained in the holes.

15. (Amended) A photonic crystal fibre as claimed in claim 1, in which the lack of higher rotational symmetry at least partly results from a variation, across the cross-section of the fibre, in the shape of the holes.

17. (Amended) A photonic crystal fibre as claimed in claim 1, in which the lack of higher rotational symmetry results from a variation across the cross-section of the fibre, in one of the following in combination with one or more of the following or with a variation in another parameter: the microstructure of the core, the diameter of the holes, the bulk material, the material contained in the holes, the shape of the holes.

18. (Amended) A photonic crystal fibre as claimed in claim 1, in which the birefringent fibre has form birefringence.

*SAC* • 19. (Amended) A photonic crystal fibre as claimed in claim 1, in which the birefringent fibre has stress birefringence.

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22. (Amended) A method as claimed in claim 20, in which the lack of higher rotational symmetry at least partly results from variations, across the cross-section of the stack, in the internal diameters of the capillaries.

23. (Amended) A method as claimed in claim 20, in which the lack of higher rotational symmetry at least partly results from variations, across the cross-section of the stack, in the material of which the canes are made.

*BF* 24. (Amended) A method as claimed in claim 20, in which the lack of higher rotational symmetry at least partly results from variations, across the cross-section of the stack, in the material with which the capillaries are filled.

25. (Amended) A method as claimed in claim 20, in which the lack of higher rotational symmetry at least partly results from variations, across the cross-section of the stack, in the external diameter of the canes.

26. (Amended) A method as claimed in claim 20, in which canes are provided at the vertices of a cladding lattice which has at-most-two-fold rotational symmetry about the centre of the canes arranged to form the core.

27. (Amended) A method as claimed in claim 20, in which capillaries of selected internal diameters are provided at the vertices of a cladding lattice which has at-most-two-fold rotational symmetry about the centre of the canes arranged form the core, the selected internal diameters of the capillaries at the vertices of the cladding lattice being different from the internal diameters of the capillaries at other sites.

28. (Amended) A method as claimed in claim 20, in which a substantial number of cladding canes, near to the canes arranged to form the core, are different from a substantial number of cladding canes, far from the canes arranged to form the core.

29. (Amended) A method as claimed in claim 20, in which the birefringence results at least partly from stresses formed within the fibre as it is drawn.

32. (Amended) A method as claimed in claim 29 in which the stresses result in the deformation of holes surrounding the core of the drawn fibre and that deformation results in birefringence.

33. (Amended) A method as claimed in claim 29 in which the stresses result in stresses in the core of the drawn fibre, and those stresses result in birefringence.

34. (Amended) A method as claimed in claim 20, in which the lack of rotational symmetry at least partly results from pressurisation of at least one of the capillaries during the drawing of the stack.

35. (Amended) A method as claimed in claim 20, in which the lack of rotational symmetry at least partly results from evacuation of at least one of the capillaries during the drawing of the stack.

36. (Amended) A method as claimed in claim 20, in which the rotational symmetry of the stack of canes is two-fold rotational symmetry.

40. (Amended) A method as claimed in claim 37, in which the tube does not undergo deformation significantly different from that which it would undergo without the pressure difference.

41. (Amended) A method as claimed in claim 37, in which, during the drawing process:

the tube is sealed near to the first end to a first end of an evacuable structure and the second end of the tube is within the evacuable structure;

at least some of the capillaries pass through the evacuable structure and are sealed to a second end thereof;

TOP SECRET - EYES ONLY

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and the evacuable structure is substantially evacuated in order to produce the second internal pressure.

*b6*  
43. (Amended) A method as claimed in claim 37, in which the stack of canes has at-most-two-fold rotational symmetry about any of the longitudinal axes.